

ABSTRACT OF THE INVENTION

The present invention relates to a novel cancer therapy based on interference with the function or on downregulation of overproduced CEA/NCA, which plays an instrumental role in tumorigenesis and malignant progression through its differentiation-blocking activity. More precisely, there is provided three short amino acid sequence subdomains in the N domain of CEA and NCA that, when applied as peptides, peptide mimetics or anti-sudomain monoclonal antibodies to malignant tumors overproducing CEA/NCA, induce them to differentiate, thereby inhibiting their ability to grow and increasing the efficacy of other modes of treatment. Four other means of releasing the CEA/NCA-imposed differentiation block are also provided. The enhanced differentiation status of cancers induced by these CEA/NCA-based novel modes of treatment is expected to increase the efficacy of virtually any other mode of treatment by enhancing the bystander effect, whereby more differentiated cancer cells normalize the behaviour of adjacent less differentiated cancer cells.

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